

SEQUENCE LISTING

<110> National Institute of Advanced Industrial Science and Technology

Fujirebio Incorporated

<120> GLYCOSYLTRANSFERASE, NUCLEIC ACID ENCODING THE
GLYCOSYLTRANSFERASE AND METHOD OF TESTING CANCERATION
USING THE NUCLEIC ACID

<130> YCT-902

<160> 20

<210> 1

<211> 1194

<212> DNA

<213> Homo sapiens

<400> 1

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<210> 2

<211> 397

<212> PRT

<213> Homo sapiens

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Lys	Ala	Tyr	Pro	Ser	Pro	Arg	Gly	Thr	Pro	Pro	Ser	Pro	Thr	Pro	Ala
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Asn	Pro	Glu	Pro	Thr	Leu	Pro	Ala	Asn	Leu	Ser	Thr	Arg	Leu	Gly	Gln
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Thr	Ile	Pro	Leu	Pro	Phe	Ala	Tyr	Trp	Asn	Gln	Gln	Gln	Trp	Arg	Leu
65					70					75				80	
Gly	Ser	Leu	Pro	Ser	Gly	Asp	Ser	Thr	Glu	Thr	Gly	Gly	Cys	Gln	Ala
				85						90				95	
Trp	Gly	Ala	Ala	Ala	Ala	Thr	Glu	Ile	Pro	Asp	Phe	Ala	Ser	Tyr	Pro
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Lys	Asp	Leu	Arg	Arg	Phe	Leu	Leu	Ser	Ala	Ala	Cys	Arg	Ser	Phe	Pro

115	120	125
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Thr Asp Val Pro Tyr Leu Leu Leu Ala Val Lys Ser Glu Pro Gly Arg		
145	150	155
Phe Ala Glu Arg Gln Ala Val Arg Glu Thr Trp Gly Ser Pro Ala Pro		
165	170	175
Gly Ile Arg Leu Leu Phe Leu Leu Gly Ser Pro Val Gly Glu Ala Gly		
180	185	190
Pro Asp Leu Asp Ser Leu Val Ala Trp Glu Ser Arg Arg Tyr Ser Asp		
195	200	205
Leu Leu Leu Trp Asp Phe Leu Asp Val Pro Phe Asn Gln Thr Leu Lys		
210	215	220
Asp Leu Leu Leu Leu Ala Trp Leu Gly Arg His Cys Pro Thr Val Ser		
225	230	235
Phe Val Leu Arg Ala Gln Asp Asp Ala Phe Val His Thr Pro Ala Leu		
245	250	255
Leu Ala His Leu Arg Ala Leu Pro Pro Ala Ser Ala Arg Ser Leu Tyr		
260	265	270
Leu Gly Glu Val Phe Thr Gln Ala Met Pro Leu Arg Lys Pro Gly Gly		
275	280	285
Pro Phe Tyr Val Pro Glu Ser Phe Phe Glu Gly Gly Tyr Pro Ala Tyr		
290	295	300
Ala Ser Gly Gly Gly Tyr Val Ile Ala Gly Arg Leu Ala Pro Trp Leu		
305	310	315
Leu Arg Ala Ala Ala Arg Val Ala Pro Phe Pro Phe Glu Asp Val Tyr		
325	330	335
Thr Gly Leu Cys Ile Arg Ala Leu Gly Leu Val Pro Gln Ala His Pro		
340	345	350
Gly Phe Leu Thr Ala Trp Pro Ala Asp Arg Thr Ala Asp His Cys Ala		

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Phe	Arg	Asn	Leu	Leu	Leu	Val
			Arg	Pro	Leu	Gly
					Pro	Gln
						Ala
						Ser
						Ile
	370		375		380	
Arg	Leu	Trp	Lys	Gln	Leu	Gln
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						Gln
						Cys
385			390		395	397

<210> 3

<211>

<212> DNA

<213> Artificial Sequence

<220> 31

<223> Description of Artificial Sequence: 5' primer for PCR

<400> 3

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31

<210> 4

<211>

<212> DNA

<213> Artificial Sequence

<220> 31

<223> Description of Artificial Sequence: 3' primer for PCR

<400> 4

cicgaattct cagcactgga gccttgggtc t

31

<210> 5

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: 5' primer for RT-PCR

<400> 5

gctgttggcc gtcaagtcag

20

<210> 6

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: 3' primer for RT-PCR

<400> 6

caggaagagc agccggat

18

<210> 7

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: probe for RT-PCR

<400> 7

cagaacgaca ggccgtga

18

<210> 8

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: 5' primer for PCR

<400> 8

gccaagctta catccgagtc ccggctcag

29

<210> 9

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: 5' primer for PCR

<400> 9

gccaagctta aggcctaccc cagccctcg

29

<210> 10

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: 3' primer for PCR

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<210> 11

<211> 55

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: 5' primer for PCR

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<210> 12

<211> 54

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: 3' primer for PCR

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<210> 13

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: 5' primer for PCR

<400> 13

gccaaagctta catccgagtc ccggctcag

29

<210> 14

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: 5' primer for PCR

<400> 14

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<210> 15

<211> 28

<212> DNA

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<220>

<223> Description of Artificial Sequence: 3' primer for PCR

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cggaattctc agcactggag ccttggt

28

<210> 16

<211> 372

<212> PRT

<213> Homo sapiens

<400> 16

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			20					25					30		
Leu	Ser	Thr	Arg	Leu	Gly	Gln	Thr	Ile	Pro	Leu	Pro	Phe	Ala	Tyr	Trp
		35					40					45			
Asn	Gln	Gln	Gln	Trp	Arg	Leu	Gly	Ser	Leu	Pro	Ser	Gly	Asp	Ser	Thr
	50					55					60				
Glu	Thr	Gly	Gly	Cys	Gln	Ala	Trp	Gly	Ala	Ala	Ala	Ala	Thr	Glu	Ile
65					70				75					80	
Pro	Asp	Phe	Ala	Ser	Tyr	Pro	Lys	Asp	Leu	Arg	Arg	Phe	Leu	Leu	Ser
			85					90				95			
Ala	Ala	Cys	Arg	Ser	Phe	Pro	Gln	Trp	Leu	Pro	Gly	Gly	Gly	Gly	Ser
			100					105				110			
Gln	Val	Ser	Ser	Cys	Ser	Asp	Thr	Asp	Val	Pro	Tyr	Leu	Leu	Leu	Ala
	115						120					125			
Val	Lys	Ser	Glu	Pro	Gly	Arg	Phe	Ala	Glu	Arg	Gln	Ala	Val	Arg	Glu
	130					135					140				
Thr	Trp	Gly	Ser	Pro	Ala	Pro	Gly	Ile	Arg	Leu	Leu	Phe	Leu	Leu	Gly
145					150				155					160	
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180	185	190
Pro Phe Asn Gln Thr Leu Lys Asp Leu Leu Leu Leu Ala Trp Leu Gly		
195	200	205
Arg His Cys Pro Thr Val Ser Phe Val Leu Arg Ala Gln Asp Asp Ala		
210	215	220
Phe Val His Thr Pro Ala Leu Leu Ala His Leu Arg Ala Leu Pro Pro		
225	230	235
Ala Ser Ala Arg Ser Leu Tyr Leu Gly Glu Val Phe Thr Gln Ala Met		
245	250	255
Pro Leu Arg Lys Pro Gly Gly Pro Phe Tyr Val Pro Glu Ser Phe Phe		
260	265	270
Glu Gly Gly Tyr Pro Ala Tyr Ala Ser Gly Gly Gly Tyr Val Ile Ala		
275	280	285
Gly Arg Leu Ala Pro Trp Leu Leu Arg Ala Ala Ala Arg Val Ala Pro		
290	295	300
Phe Pro Phe Glu Asp Val Tyr Thr Gly Leu Cys Ile Arg Ala Leu Gly		
305	310	315
Leu Val Pro Gln Ala His Pro Gly Phe Leu Thr Ala Trp Pro Ala Asp		
325	330	335
Arg Thr Ala Asp His Cys Ala Phe Arg Asn Leu Leu Leu Val Arg Pro		
340	345	350
Leu Gly Pro Gln Ala Ser Ile Arg Leu Trp Lys Gln Leu Gln Asp Pro		
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<210> 17

<211> 282

<212> PRT

<213> Homo sapiens

<400> 17

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Pro	Tyr	Leu	Leu	Leu	Ala	Val	Lys	Ser	Glu	Pro	Gly	Arg	Phe	Ala	Glu
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Asp	Ser	Leu	Val	Ala	Trp	Glu	Ser	Arg	Arg	Tyr	Ser	Asp	Leu	Leu	Leu
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Trp	Asp	Phe	Leu	Asp	Val	Pro	Phe	Asn	Gln	Thr	Leu	Lys	Asp	Leu	Leu
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Leu	Leu	Ala	Trp	Leu	Gly	Arg	His	Cys	Pro	Thr	Val	Ser	Phe	Val	Leu
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	210						215					220			

Cys	Ile	Arg	Ala	Leu	Gly	Leu	Val	Pro	Gln	Ala	His	Pro	Gly	Phe	Leu
225						230				235					240
Thr	Ala	Trp	Pro	Ala	Asp	Arg	Thr	Ala	Asp	His	Cys	Ala	Phe	Arg	Asn
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Leu	Leu	Leu	Val	Arg	Pro	Leu	Gly	Pro	Gln	Ala	Ser	Ile	Arg	Leu	Trp
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Lys	Gln	Leu	Gln	Asp	Pro	Arg	Leu	Gln	Cys						
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<210> 18

<211> 1845

<212> DNA

<213> Mouse

<400> 18

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<210> 19

<211> 1170

<212> DNA

<213> Mouse

<400> 19

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<210> 20

<211> 389

<212> PRT

<213> Mouse

<400> 20

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Lys	Ala	Glu	Pro	Arg	Gly	Ala	Leu	Pro	Ser	Pro	Thr	Pro	Pro	Asn	Ala
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Glu	Pro	Thr	Leu	Pro	Thr	Asn	Leu	Ser	Ala	Arg	Leu	Gly	Gln	Thr	Gly
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Pro	Leu	Ser	Ser	Ala	Tyr	Trp	Asn	Gln	Gln	Gln	Arg	Gln	Leu	Gly	Val
65					70					75				80	

Leu	Pro	Ser	Thr	Asp	Cys	Gln	Thr	Trp	Gly	Thr	Val	Ala	Ala	Ser	Glu
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Ile	Leu	Asp	Phe	Ile	Leu	Tyr	Pro	Gln	Glu	Leu	Arg	Arg	Phe	Leu	Leu
				100				105					110		
Ser	Ala	Ala	Cys	Arg	Ser	Phe	Pro	Leu	Trp	Leu	Pro	Ala	Gly	Glu	Gly
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Ser	Pro	Val	Ala	Ser	Cys	Ser	Asp	Lys	Asp	Val	Pro	Tyr	Leu	Leu	Leu
				130				135					140		
Ala	Val	Lys	Ser	Glu	Pro	Gly	His	Phe	Ala	Ala	Arg	Gln	Ala	Val	Arg
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Gly	Ser	Pro	Leu	Gly	Met	Gly	Gly	Pro	Asp	Leu	Arg	Ser	Leu	Val	Thr
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Trp	Glu	Ser	Arg	Arg	Tyr	Gly	Asp	Leu	Leu	Leu	Trp	Asp	Phe	Leu	Asp
				195				200					205		
Val	Pro	Tyr	Asn	Arg	Thr	Leu	Lys	Asp	Leu	Leu	Leu	Leu	Thr	Trp	Leu
				210				215					220		
Ser	His	His	Cys	Pro	Asp	Val	Asn	Phe	Val	Leu	Gln	Val	Gln	Asp	Asp
225					230					235				240	
Ala	Phe	Val	His	Ile	Pro	Ala	Leu	Leu	Glu	His	Leu	Gln	Thr	Leu	Pro
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Pro	Thr	Trp	Ala	Arg	Ser	Leu	Tyr	Leu	Gly	Glu	Ile	Phe	Thr	Gln	Ala
				260					265				270		
Lys	Pro	Leu	Arg	Lys	Pro	Gly	Gly	Pro	Phe	Tyr	Val	Pro	Lys	Thr	Phe
				275				280					285		
Phe	Glu	Gly	Asp	Tyr	Pro	Ala	Tyr	Ala	Ser	Gly	Gly	Gly	Tyr	Val	Ile
				290				295					300		
Ser	Gly	Arg	Leu	Ala	Pro	Trp	Leu	Leu	Gln	Ala	Ala	Ala	Arg	Val	Ala
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325

330

335

Gly Leu Ala Pro Arg Ala His Pro Gly Phe Leu Thr Ala Trp Pro Ala

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345

350

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355

360

365

Pro Val Ser Pro Gln Asp Thr Ile Trp Leu Trp Arg His Leu Trp Val

370

375

380

Pro Glu Leu Gln Cys

385

389